FIG. 1

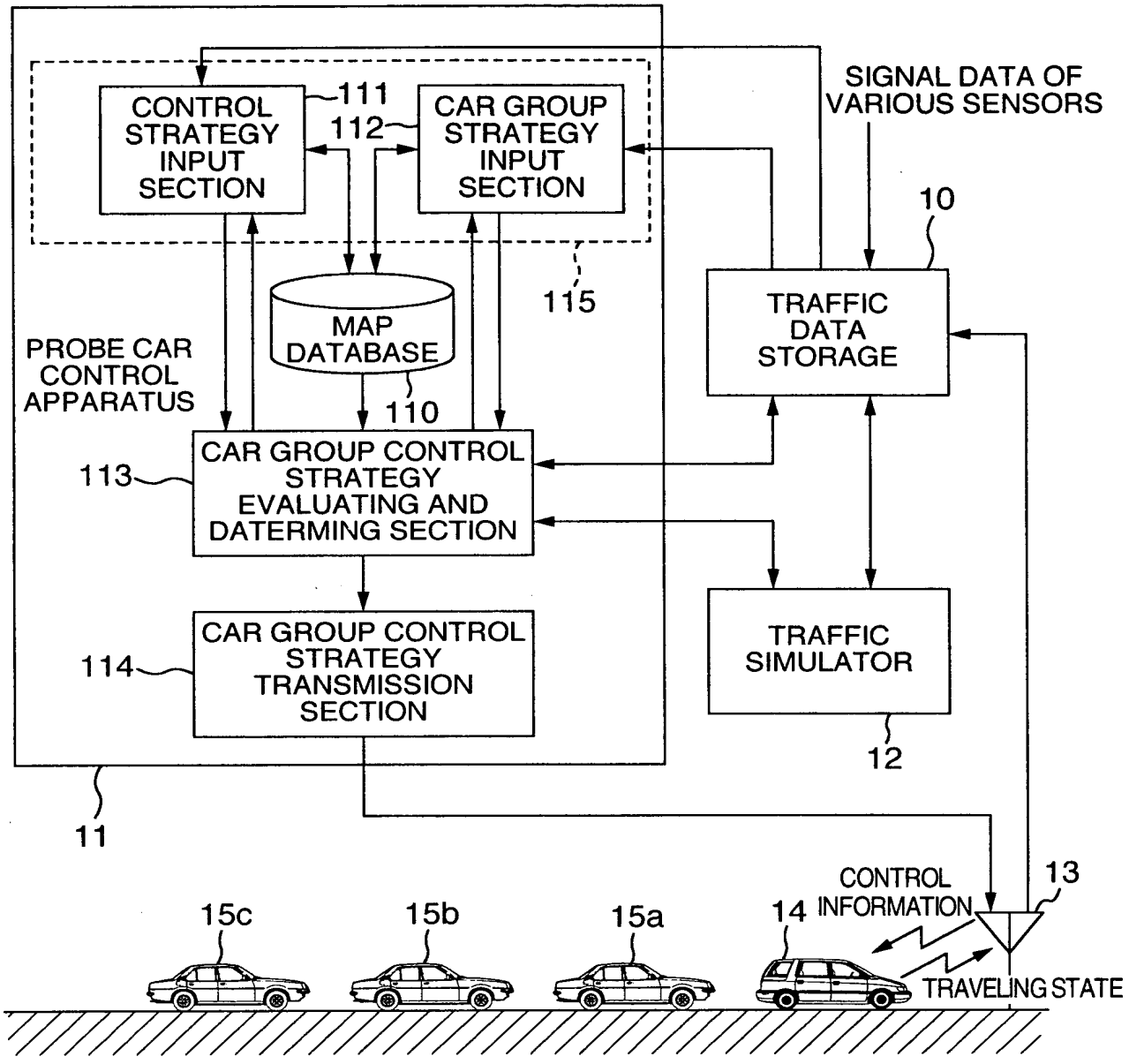

CONTROL STRATEGY INPUT SECTION
111
112
CAR GROUP STRATEGY INPUT SECTION
SIGNAL DATA OF VARIOUS SENSORS
10
115
MAP DATABASE
110
PROBE CAR CONTROL APPARATUS
TRAFFIC DATA STORAGE
113
CAR GROUP CONTROL STRATEGY EVALUATING AND DATERMING SECTION
114
CAR GROUP CONTROL STRATEGY TRANSMISSION SECTION
TRAFFIC SIMULATOR
12
11
CONTROL INFORMATION
13
14
15c
15b
15a
TRAVELING STATE

FIG. 2

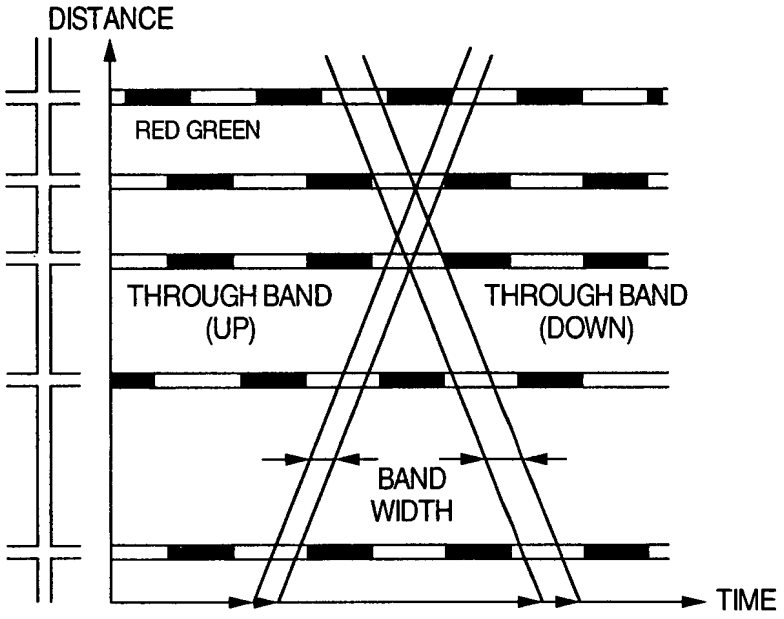


FIG. 3

TIME	BASE STATION ID	CAR ID	POSITION (EAST LONGITUDE)	POSITION (NORTH LATITUDE)	SPEED	CAR KIND	WEATHER	----
10:03:25	123	123456	140.36.13	36.30.20	46	SMALL SIZE	RAIN	----
10:04:10	321	234567	140.31.20	36.11.11	7	LARGE SIZE	CLEAR	----
10:04:12	234	345678	139.58.50	35.40.45	15	MEDIUM SIZE	CLEAR	----
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

FIG. 4

TIME	SENSOR 1			SENSOR 2			...
	VOLUME OF TRAFFIC	OCCUPATION FACTOR	AVERAGE SPEED	VOLUME OF TRAFFIC	OCCUPATION FACTOR	AVERAGE SPEED	...
10:00 ~ 10:05	50	25	13	81	21	25	...
10:05 ~ 10:10	56	30	12	73	29	17	...
10:10 ~ 10:15	61	22	18	66	32	14	...
10:15 ~ 10:20	51	12	28	59	34	11	...
⋮	⋮	⋮	⋮	⋮	⋮	⋮	

FIG. 5

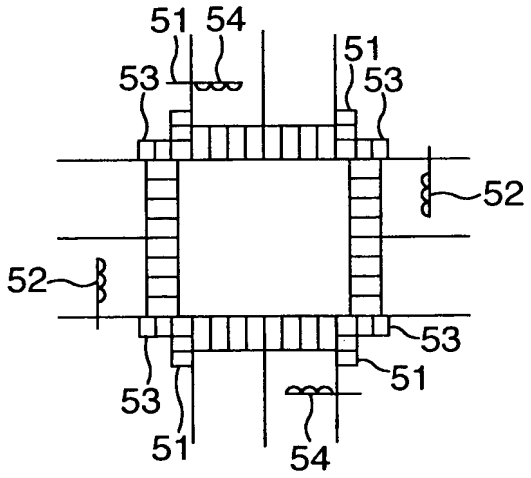


FIG. 6

STEP NUMBER	1	2	3	4	5	6	7	8	9	10
51	GREEN	GREEN FLASHING	RED	RED	RED	RED	RED	RED	RED	RED
52	GREEN	GREEN	GREEN	YELLOW	RED	RED	RED	RED	RED	RED
53	RED	RED	RED	RED	RED	GREEN	GREEN FLASHING	RED	RED	RED
54	RED	RED	RED	RED	RED	GREEN	GREEN	GREEN	YELLOW	RED
DURATION IN SECONDS	47	5	2	4	2	28	5	2	3	2
START TIME	9:31:00	9:31:47	9:31:52	9:31:54	9:3158	9:32:00	9:32:28	9:32:33	9:32:35	9:32:38

FIG. 7

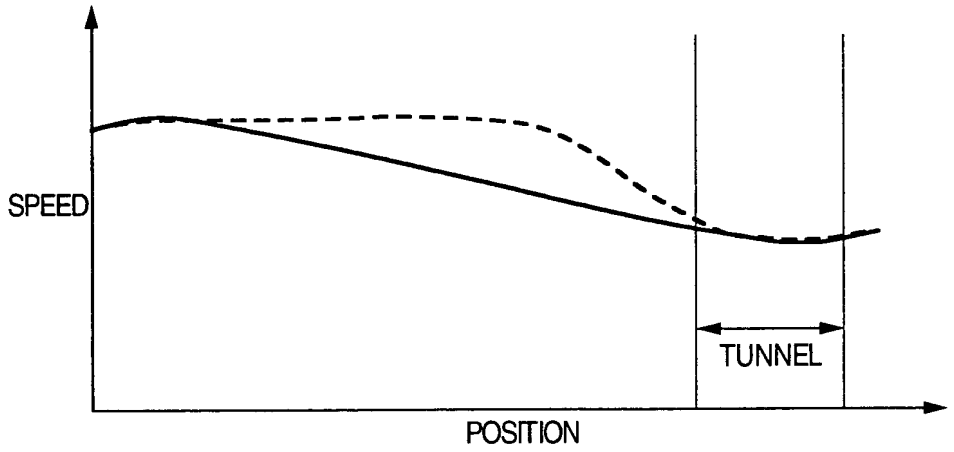


FIG. 8

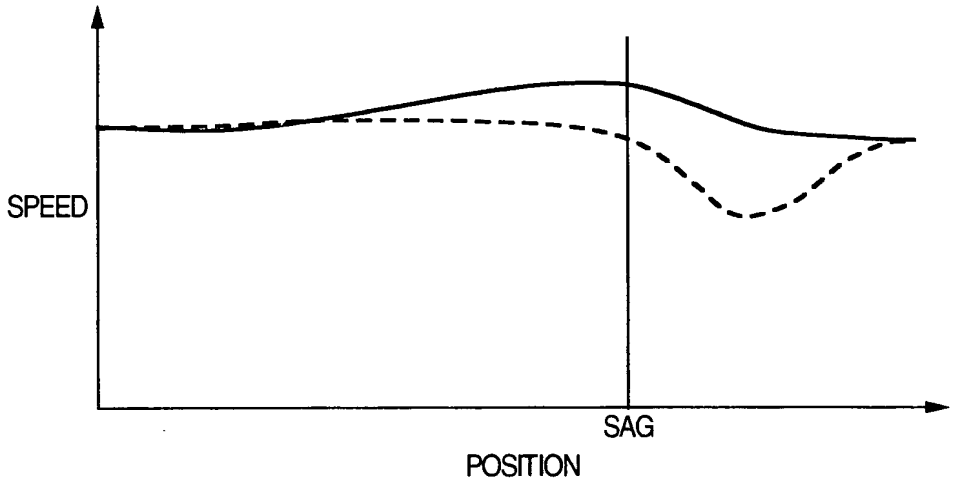


FIG. 9

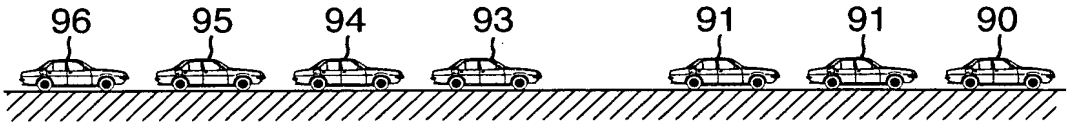


FIG. 10

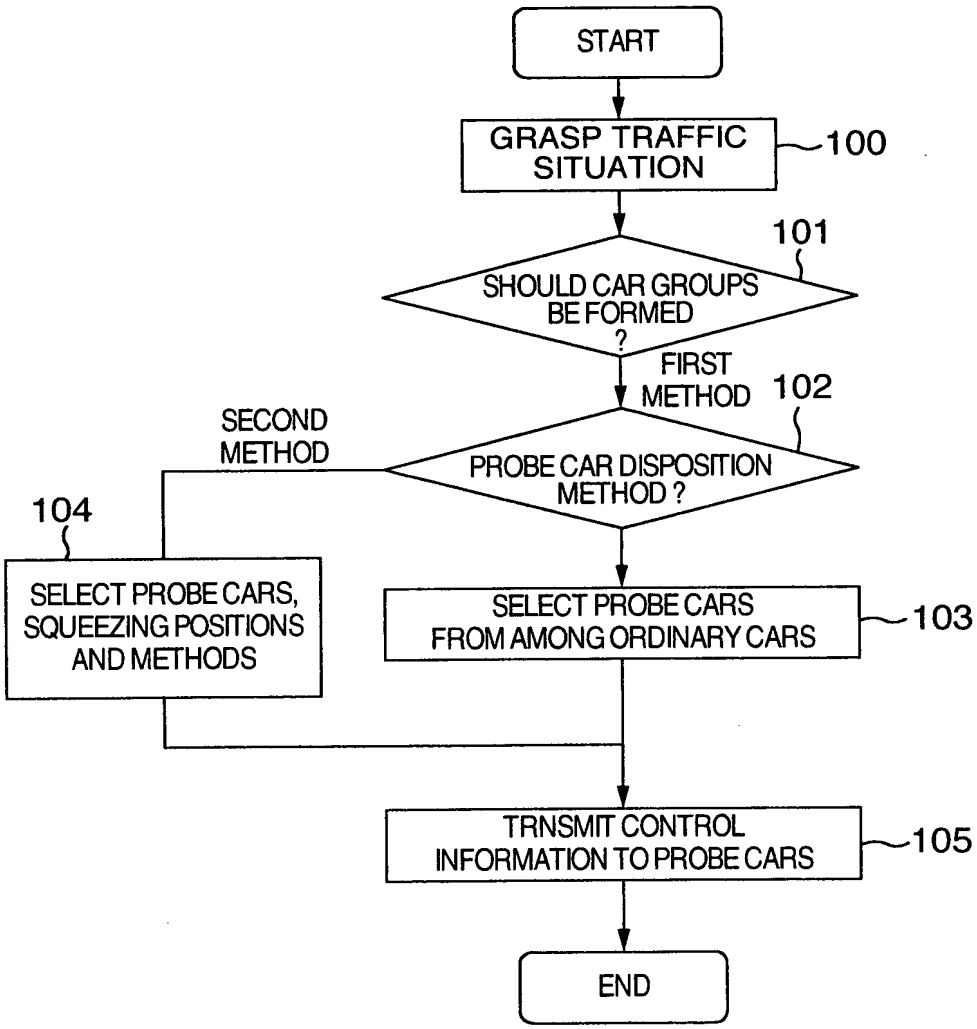

START
GRASP TRAFFIC SITUATION
100
101
SHOULD CAR GROUPS BE FORMED ?
FIRST METHOD
102
SECOND METHOD
PROBE CAR DISPOSITION METHOD ?
104
SELECT PROBE CARS, SQUEEZING POSITIONS AND METHODS
SELECT PROBE CARS FROM AMONG ORDINARY CARS
103
TRNSMIT CONTROL INFORMATION TO PROBE CARS
105
END

FIG. 11

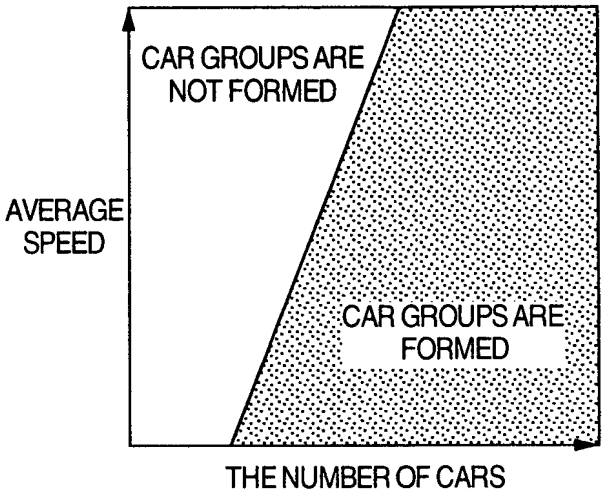

CAR GROUPS ARE
NOT FORMED
AVERAGE
SPEED
CAR GROUPS ARE
FORMED
THE NUMBER OF CARS

FIG. 12

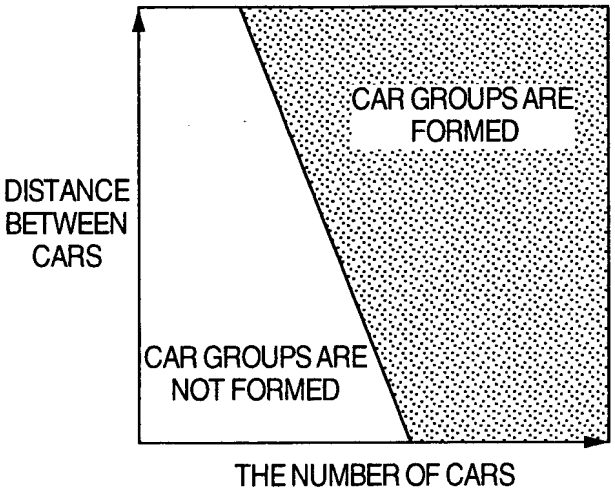

CAR GROUPS ARE
FORMED
DISTANCE
BETWEEN
CARS
CAR GROUPS ARE
NOT FORMED
THE NUMBER OF CARS

FIG. 13

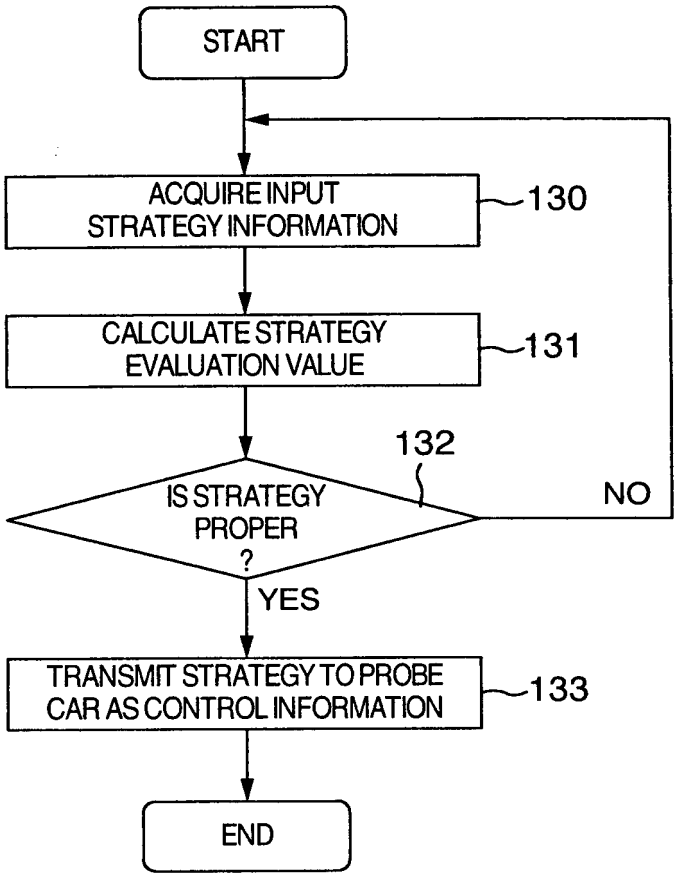

START
ACQUIRE INPUT STRATEGY INFORMATION
130
CALCULATE STRATEGY EVALUATION VALUE
131
132
IS STRATEGY PROPER ?
NO
YES
TRANSMIT STRATEGY TO PROBE CAR AS CONTROL INFORMATION
133
END

FIG. 14

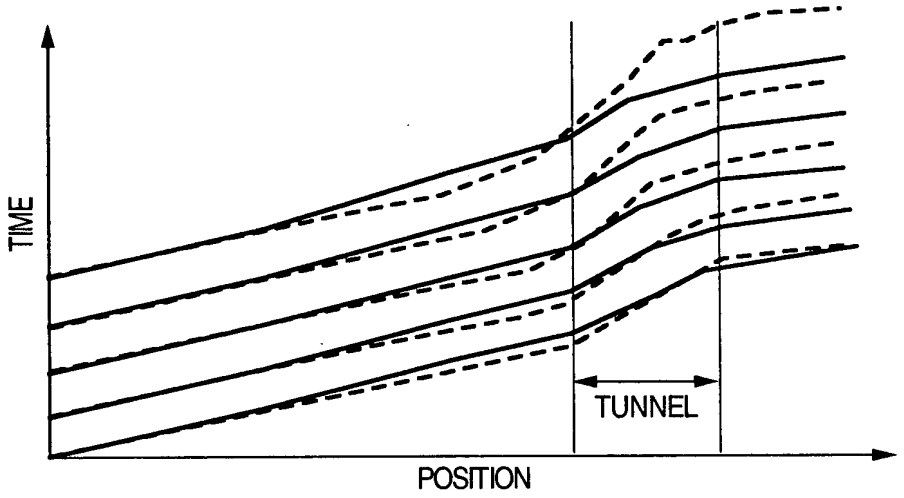


FIG. 15

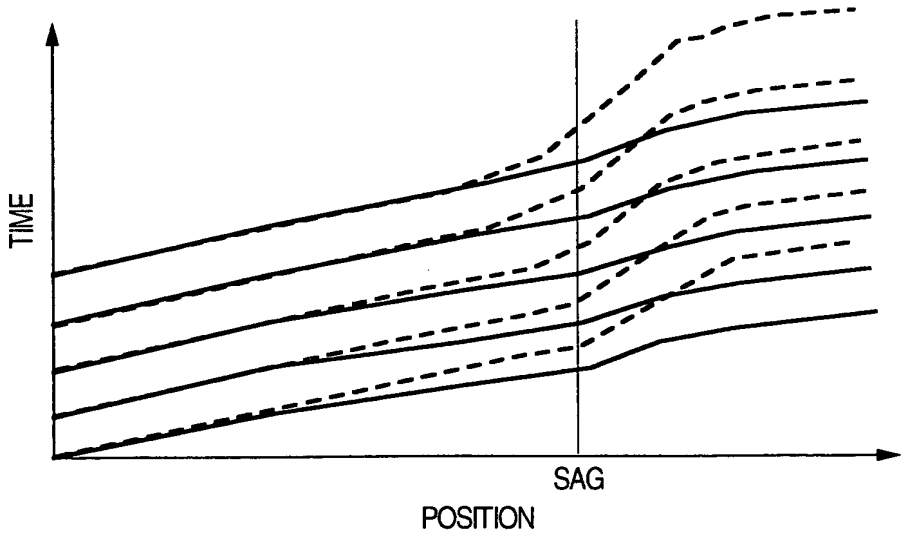


FIG. 16

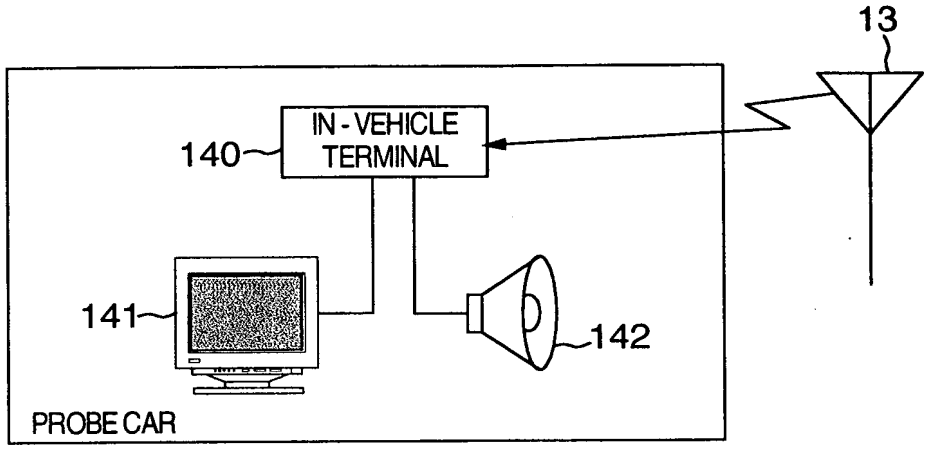

13
IN - VEHICLE TERMINAL
140
141
142
PROBE CAR

FIG. 17

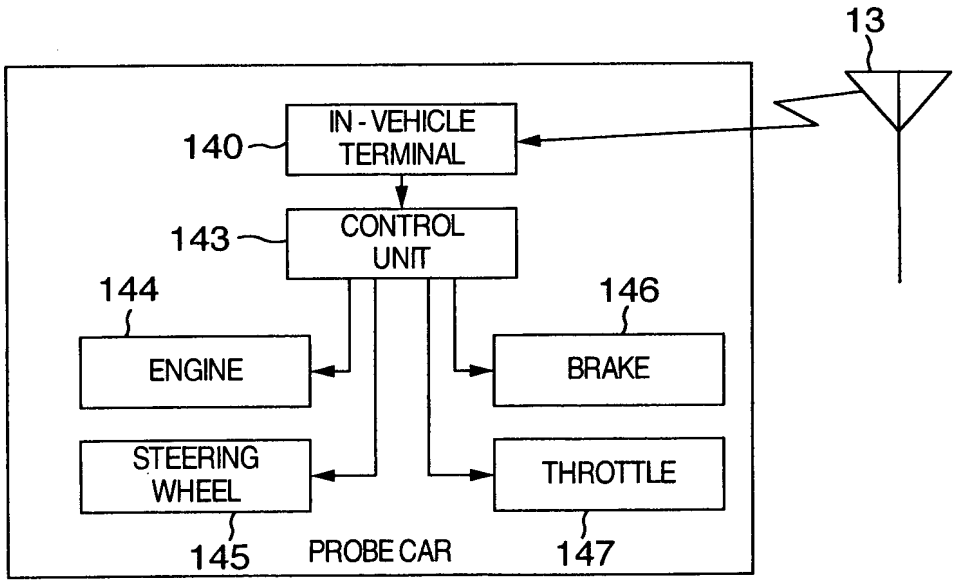

13
IN - VEHICLE TERMINAL
140
CONTROL UNIT
143
144
146
ENGINE
BRAKE
STEERING WHEEL
THROTTLE
145
PROBE CAR
147

FIG. 18

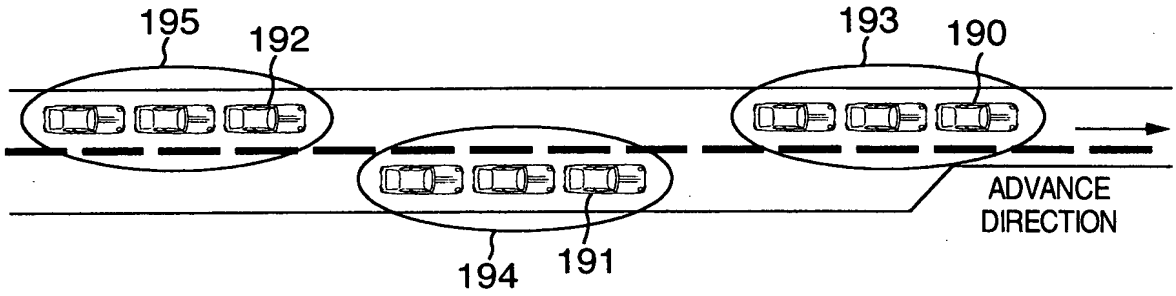

195
192
193
190
ADVANCE DIRECTION
194
191

FIG. 19

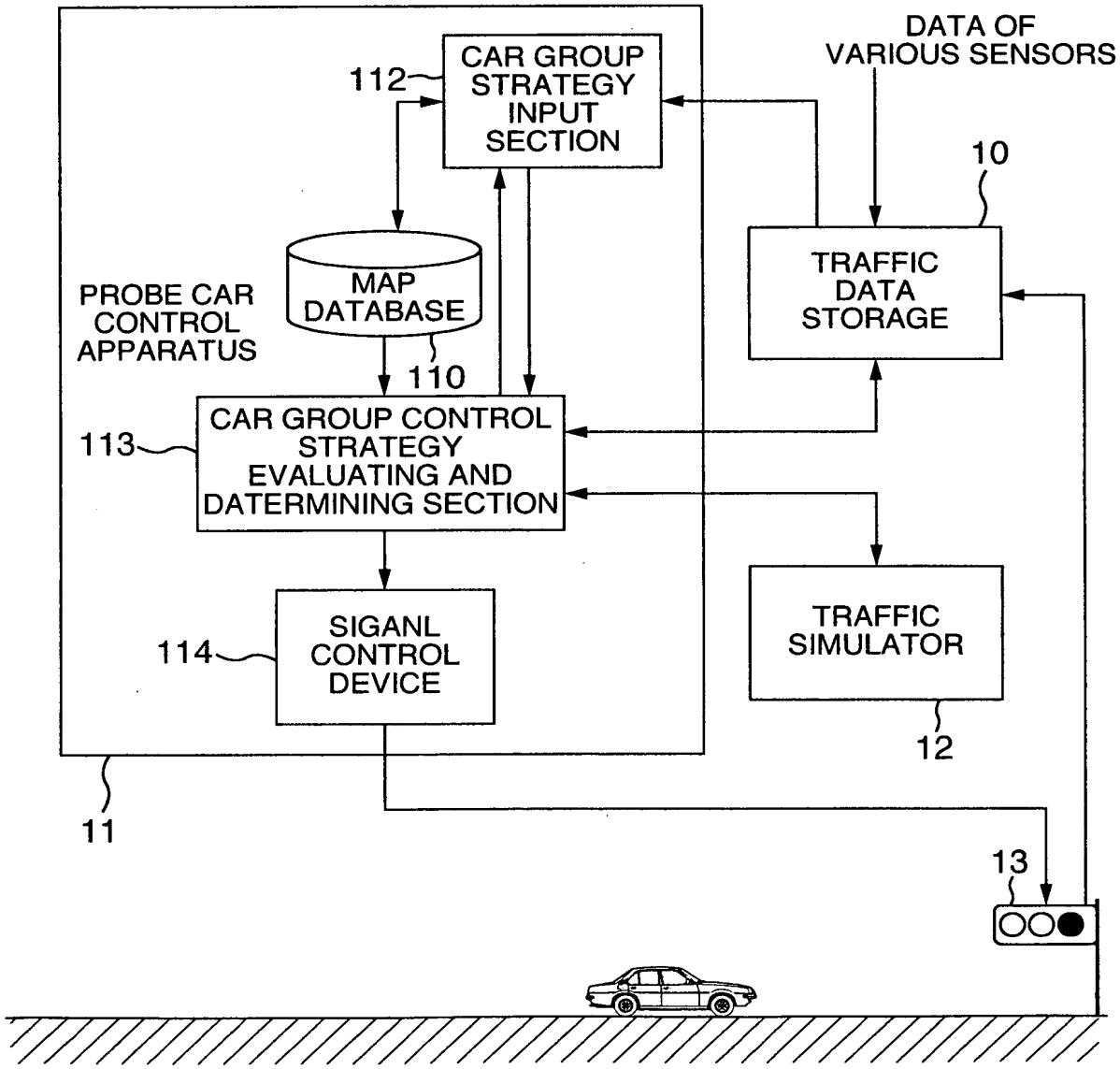

DATA OF VARIOUS SENSORS
112
CAR GROUP STRATEGY INPUT SECTION
10
TRAFFIC DATA STORAGE
PROBE CAR CONTROL APPARATUS
MAP DATABASE
110
113
CAR GROUP CONTROL STRATEGY EVALUATING AND DATERMINING SECTION
114
SIGANL CONTROL DEVICE
TRAFFIC SIMULATOR
12
11
13

FIG. 20

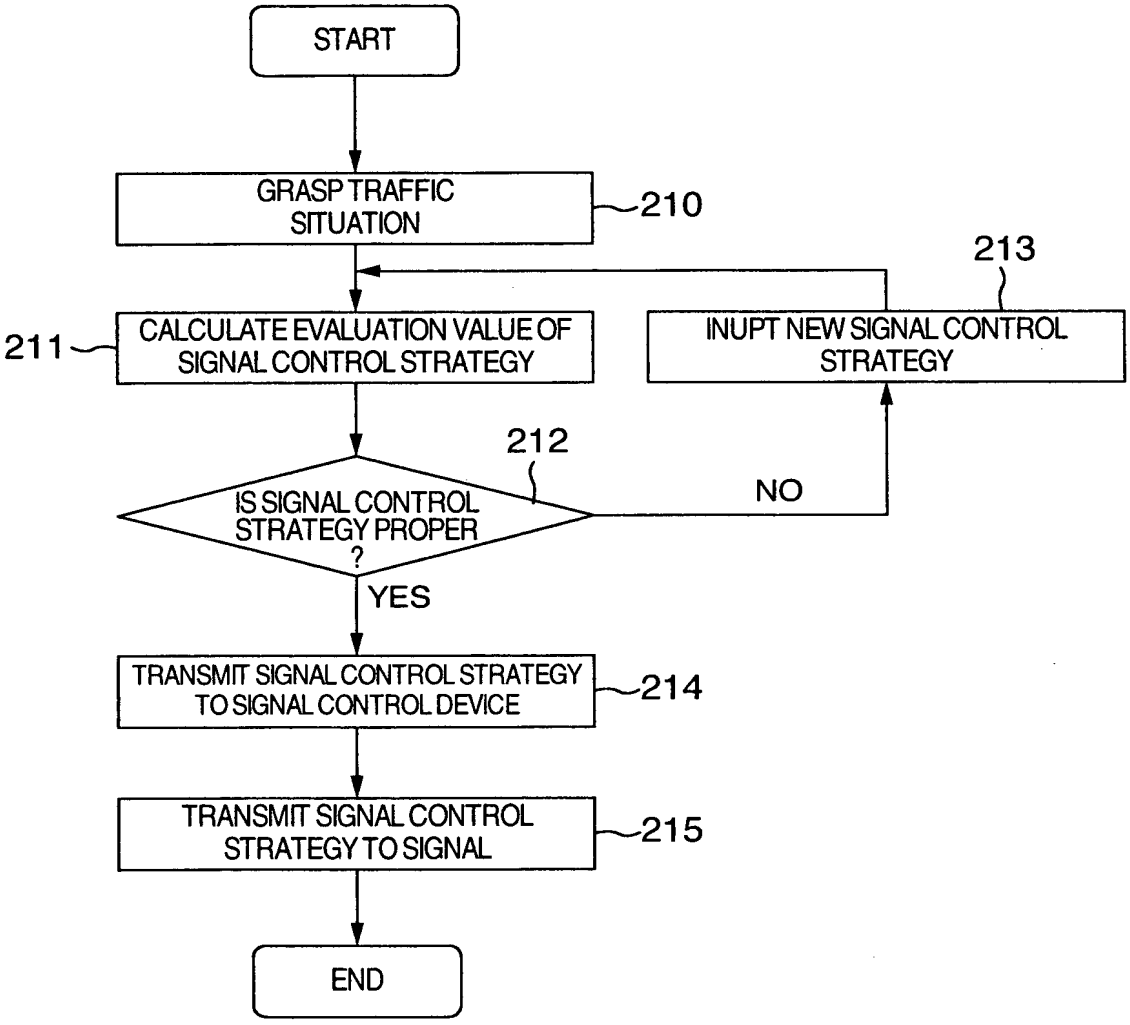

START
GRASP TRAFFIC SITUATION
210
213
211
CALCULATE EVALUATION VALUE OF SIGNAL CONTROL STRATEGY
INUPT NEW SIGNAL CONTROL STRATEGY
212
IS SIGNAL CONTROL STRATEGY PROPER ?
NO
YES
TRANSMIT SIGNAL CONTROL STRATEGY TO SIGNAL CONTROL DEVICE
214
TRANSMIT SIGNAL CONTROL STRATEGY TO SIGNAL
215
END

FIG. 21

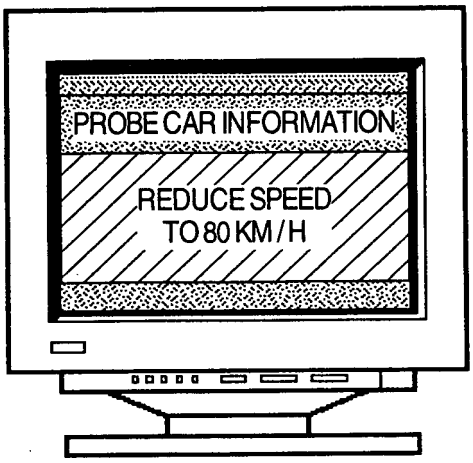

PROBE CAR INFORMATION
REDUCE SPEED
TO 80 KM / H

FIG. 22

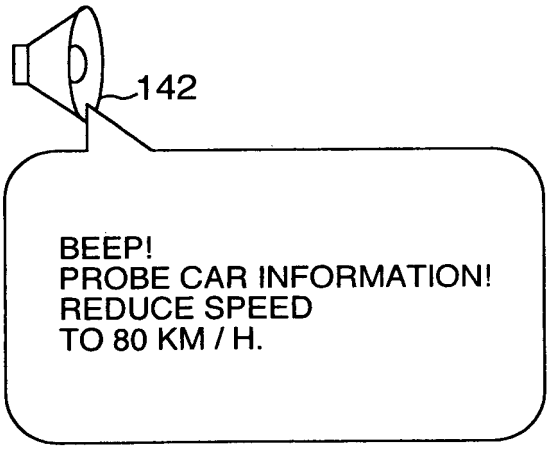

142
BEEP!
PROBE CAR INFORMATION!
REDUCE SPEED
TO 80 KM / H.

FIG. 23

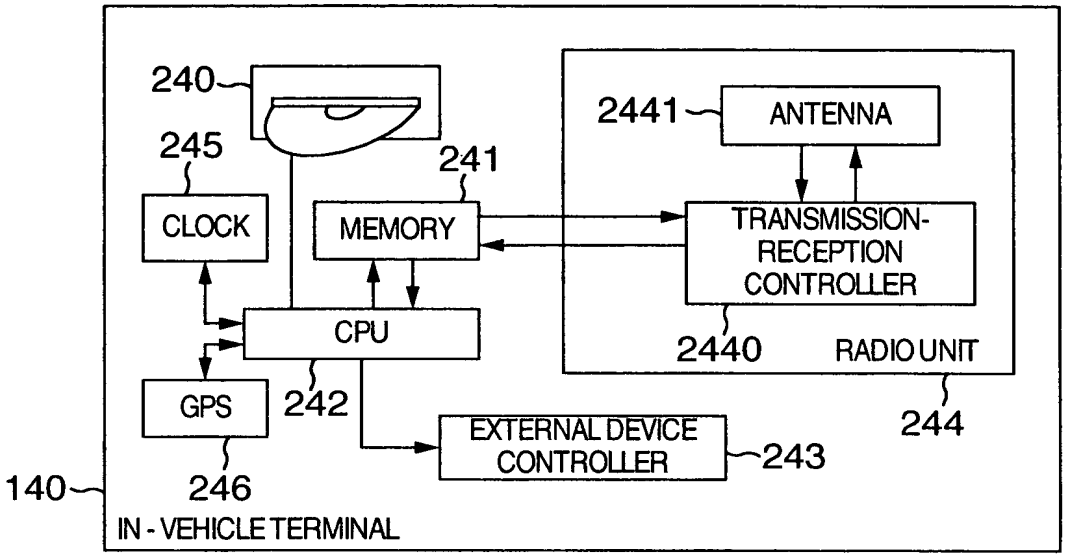
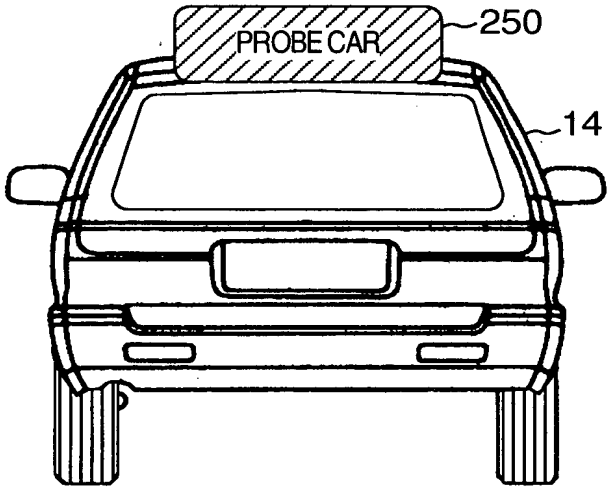

240
245
241
2441
ANTENNA
CLOCK
MEMORY
TRANSMISSION-
RECEPTION
CONTROLLER
CPU
2440
RADIO UNIT
GPS
242
244
EXTERNAL DEVICE
CONTROLLER
243
140
246
IN - VEHICLE TERMINAL

FIG. 24


PROBE CAR
250
14